

U.S. Patent Application No. 10/689,756
Amendment dated February 20, 2008
Reply to Office Action of December 13, 2007

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AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently amended) An image processing system comprising:

a camera for picking up a workpiece; and

an image processing apparatus for capturing image pickup data of the workpiece picked up by said camera and performing image processing, said image processing apparatus including a trigger receiving section for receiving a trigger from an outside to initiate capture of workpiece image pickup data by said camera, a trigger generation section for generating a predetermined number of internal triggers at predetermined intervals via an interval timer after said trigger receiving section receives the trigger from the outside, each of the internal triggers initiating capture of workpiece image pickup data at the predetermined intervals, an image processing section for performing image processing with respect to each of the image pickup data picked up by the camera after receipt of the trigger from the outside and the internal triggers to generate ~~image processing result data~~, and a statistical processing section for ~~performing statistical processing of each image processing result data from the image processing section~~ calculating variations between the image pickup data picked up by the camera after receipt of the trigger from the outside and the image pickup data initiated by the predetermined number of internal triggers and for determining abnormal image pickup data that deviates from a predetermined range and eliminating the abnormal image pickup data from the statistical processing.

2. (Original) The image processing system as defined in claim 1, wherein a user can arbitrarily set the number of generations of the internal triggers.

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3. (Original) The image processing system as defined in claim 1, wherein said image processing apparatus includes a display section for displaying a result calculated by the statistical processing section.

4. (Currently amended) An image processing method comprising:

receiving an external trigger from the outside to initiate image pickup processing of a workpiece;

generating a predetermined number of internal triggers at predetermined intervals via an interval timer after receiving the trigger from the outside;

picking up workpiece image pickup data by a camera after receipt of each of the the external trigger and the internal triggers;

performing image processing with respect to each of the workpiece image pickup data picked up by the camera after receipt of the external trigger and internal triggers to generate image processing result data; and

performing statistical processing to calculate variations between of each image processing result data obtained from the image processing the image pickup data picked up by the camera after receipt of the external triggers and the internal triggers, and determining abnormal image pickup data that deviates from a predetermined range and eliminating the abnormal image pickup data from the statistical processing.

5. (Original) The image processing method as defined in claim 4, further comprising:
setting the number of generations of the internal triggers.

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6. (Original) The image processing method as defined in claim 4, further comprising:
displaying a result calculated from the statistical processing.
7. (Previously presented) The image processing system as defined in claim 1, wherein the statistical processing comprises generating at least one of a maximum value of variation in workpiece position, a minimum value of variation in workpiece position, and an average value of variation in workpiece position.
8. (Canceled).
9. (Previously presented) The image processing system as defined in claim 1, wherein the predetermined intervals are set to avoid synchronizing with a period of an edge position of the workpiece.
10. (Previously presented) The image processing method as defined in claim 4, wherein the statistical processing comprises generating at least one of a maximum value of variation in workpiece position, a minimum value of variation in workpiece position, and an average value of variation in workpiece position.
11. (Canceled).
12. (Previously presented) The image processing method as defined in claim 4, further comprising setting the predetermined intervals to avoid synchronizing with a period of an edge

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position of the workpiece.

13. (New) The image processing system as defined in claim 1, wherein the predetermined range has both an upper limit value of data and a lower limit value of data.

14. (New) The image processing method as defined in claim 4, wherein the predetermined range has both an upper limit value of data and a lower limit value of data.